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Health Consultation No. 3

Soil/Sediment Sampling Location Recommendation

PRECISION NATIONAL CORPORATION

CLARKS-SUMMIT, LACKAWANNA COUNTY, PENNSYLVANIA

CERCLIS NO. PAD053676631

OCTOBER 14, 1998

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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Prepared by:

Pennsylvania Department of Health
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

SUMMARY

This document responds to a resident's request for the Pennsylvania Department of Health (PADOH)/Agency for Toxic Substances and Disease Registry (ATSDR) to recommend soil/sediment sampling locations near the Precision National Plating Site (PNPS).

Historic off-site soil and sediment sampling does not indicate the existence of a public health threat. However, residents who use the Ackerly Fairgrounds or their backyards for recreational purposes continue to express concern that soils in these areas may be (or may become) contaminated with hexavalent chromium that was (or may be) deposited in these areas from contaminated sediments in the Ackerly Creek during flooding. Specifically, residents are concerned that their children's health could be affected from use of these areas in the future.

PADOH, under cooperative agreement with ATSDR, selected soil and sediment sampling locations for hexavalent chromium where children are present and likely to come in contact with this hazardous contaminant that may have originated at the PNPS. These areas include Ackerly Fairgrounds, Ackerly Creek, and other areas near PNPS. PADOH/ATSDR will evaluate the results to determine if a public health threat exists for people recreating or using these areas.

PADOH/ATSDR, conclude that the proposed soil/sediment sampling locations, presented in this document, provide points that will provide data to determine if several potential areas for community or residential exposure are contaminated with hexavalent chromium at levels that could affect the health of people using them. PADOH will evaluate the sampling results, as soon as they are available, and determine their public health significance. Public health education discussing our evaluation and conclusion will be provided in writing to the residents exposed to these media. Conclusions and recommendations in this document are site-specific.

BACKGROUND AND STATEMENT OF ISSUES

PNPS owns and operates a chromium plating facility at 198 Ackerly Road, approximately 0.75 miles north of Clarks Summit, Pennsylvania (Figures 1-3). The 46-acre property is located in a rural area and has operated as a plating facility since 1956. The previous owner operated the facility from its inception in 1956 until 1971 for plating and machining locomotive crankshafts. PNPS acquired ownership of the site in 1971. PNPS limited operations at the facility to locomotive crankshafts until 1975 when the company added a cylinder-lining division. An addition to the plant was constructed in 1975 to accommodate the plating of cylinder linings [1].

The site is located in a mountainous region of northeastern Pennsylvania at an elevation of approximately 1,190 feet above mean sea level (amsl). A topographic high of 1,240 feet amsl is located approximately 400 feet south of the facility. Based on topographic data, the direction of surface drainage at the site is to the north-northwest (downhill) at a gradient of approximately 660

feet per mile. The surrounding area is drained by Ackerly Creek, which flows generally from northeast to southwest toward Glenburn Pond (Figure 2).

PADOH has been actively involved at the site since November 1997. On October 29, 1997, EPA Region III requested ATSDR to recommend residential sampling locations and determine if residents near the PNPS site are currently exposed to hexavalent chromium in their private well water at levels that pose a public health threat. EPA also requested ATSDR to recommend locations for the placement of monitoring wells necessary to determine the extent of a groundwater plume containing hexavalent chromium that is believed to have originated at the PNPS site. Health consultation (HC) #1 addresses EPA's request for assistance.

On November 20-21, 1997, PADOH staff met with Sarah Caspar, EPA On-Scene Coordinator for PNPS, Joseph Iannuzzo, Project Officer, PADEP, Jack Kelly, ATSDR Region III, and residents who may have had past exposure to hexavalent chromium from the site and listened to their concerns. A few residents who had yards in the flood plain expressed concern that hexavalent chromium may have left the site in surface water runoff and entered their yards in sediment during flood periods. During the meeting, PADOH agreed to recommend soil and sediment sampling locations to EPA and evaluate the results to and determine the public health significance of residential or community exposure to these media. EPA agreed to assure that the samples would be obtained, analyzed, and provide the results to PADOH for evaluation.

On May 7-8, 1998, Robert M. Stroman and J.E. Godfrey, staff hydrogeologist surveyed nearby residential areas and woodlands surrounding the site. During the survey, areas where residents expressed concern were observed. This provided additional information to assist in the identification and selection of sampling locations where the community may be exposed to hexavalent chromium in soil or sediment in the event that these media are found to be contaminated. The proposed sampling locations recommended by PADOH are discussed as follows.

During our site visits, we spent considerable time interacting with the community obtaining their health concerns. Although historic off-site soil and sediment sampling did not indicate the existence of a public health threat, residents who use the Ackerly Fairgrounds or their backyards for recreational purposes continue to express concern that soils in these areas may be (or may become) contaminated with hexavalent chromium deposited in these areas from contaminated sediments in the Ackerly Creek during flooding. They also expressed concern that chromium was found to be present along abandoned trolley tracks upgradient of their homes and complained of observing green surface water flowing toward the Ackerly Creek during rains.

DISCUSSION

Soil samples collected by PNPS's consultant in 1993 showed low level total chromium contamination (10+/- parts per million) along the trolley track [1] near. Figures 2 & 3 show a

home on the northeast side of Ackerly road, topographically downgradient of the abandoned trolley tracks. During our site visits, we observed two distinct areas where children play outside of this home on swings. During hot and dry weather the surface soil beneath the swings may have the tendency to become airborne when the swings are in use. Soil samples were not obtained upgradient of this home along the trolley tracks. Therefore, we have no information to evaluate if chromium is likely to be present in these play areas. Because there is evidence that the soils near the home along the trolley track are contaminated and the possibility exists that hexavalent chromium could have migrated into this yard in surface water runoff, we believe to protect the health of children, it is prudent to sample surface soil (0-2") in the area beneath the swings.

If hexavalent chromium has migrated off the PNPS site in surface water as suggested by several residents during our site visits, it may have also contaminated Ackerly Creek sediment. Several backyards of homes along Ackerly Road as well as the Ackerly Fairgrounds are within the Ackerly Creek flood plain. During flooding, contaminated sediments could be deposited on the yards and fairgrounds and serve as a source for public exposure during recreational activities. During our site visits, we observed two baseball diamonds and other evidence that the fairgrounds are used by children for sporting activities.

The soil/sediment sampling, proposed in this document, will provide data for PADOH to evaluate to determine if potential areas for community or residential exposure are contaminated with hexavalent chromium at levels that could harm the health of people using them. Figures 2 & 3 show the proposed locations of soil and sediment sampling. Final locations may be adjusted depending upon local topography, access, and availability.

PADOH and ATSDR selected these sampling locations giving special consideration to areas where children may play. PADOH will review the sampling results as soon as they are available, determine their public health significance, and report our findings in forthcoming PNPS HC #2.

CONCLUSIONS

PADOH concludes that the proposed soil and sediment sampling locations discussed in this document will provide points to confirm historic sampling to address community health concern. Sampling of these media is necessary to determine if they pose a threat to public health.

RECOMMENDATIONS

1. Sample (0-2") locations identified in Figure 3 for hexavalent chromium to determine if the public is exposed to the contaminant in these media at levels that could harm their health. EPA will request PNPS to implement this recommendation.

2. Review and evaluate the results of the soil/sediment sampling and determine if the public may be exposed to these media at levels that could harm their health. Place emphasis on children's health. PADOH will evaluate the soil and sediment sampling results, determine their public health significance, share our conclusions with the community and take necessary action to protect the public health.

REFERENCES

1. Engineering Evaluation/Cost Analysis Precision National Plating Services, Inc., Clarks Summit, Pennsylvania. Geraghty & Miller. October 1996.

PREPARER OF REPORT

Robert M Stroman, B.S.
Pennsylvania Department of Health

CERTIFICATION

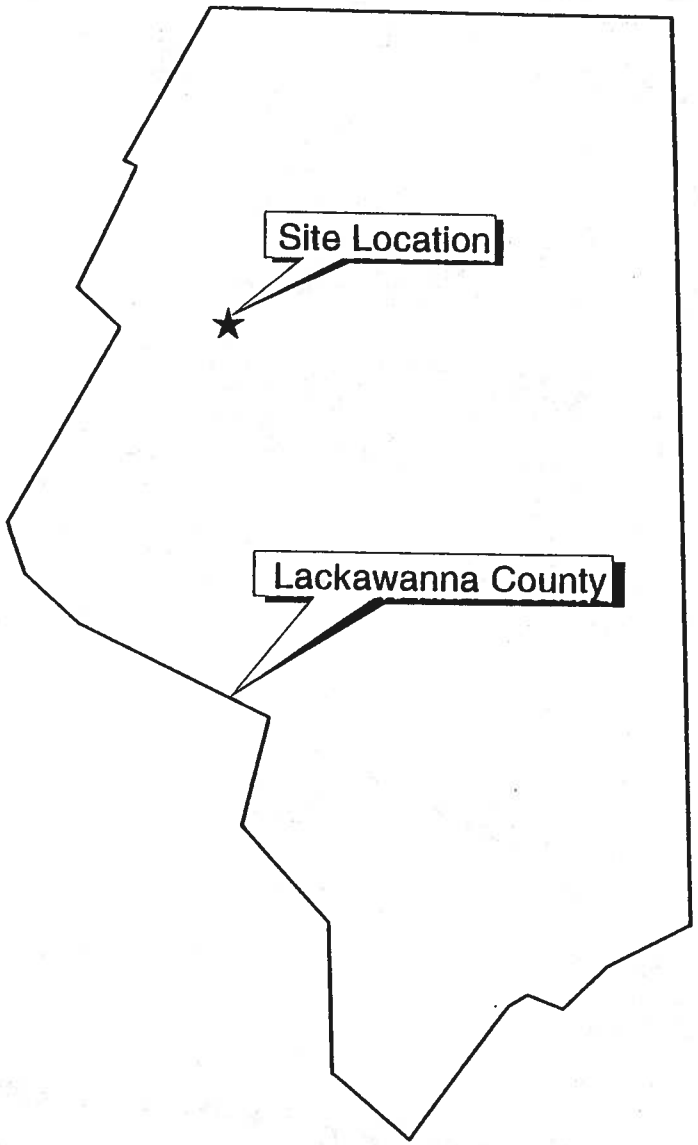
The Precision National Plating Services Site Health Consultation #3 has been prepared by the Pennsylvania Department of Health under Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.

Roberta Erlwein
Technical Project Officer, SPS, SSAB, DHAC

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.

Richard E. Gillig
Chief, SPS, SSAB, DHAC, ATSDR

Precision National Site Location Map



Legend

Lackawanna County

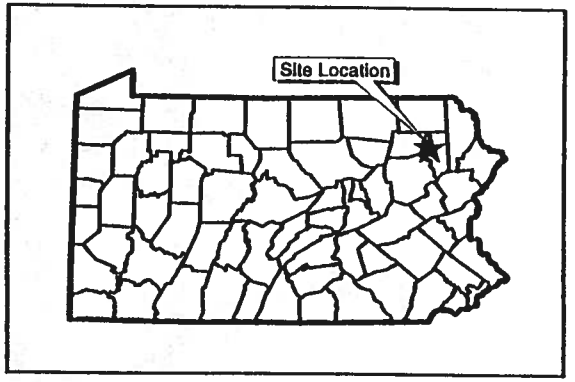


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Figure 2

Precision National Topographic Map

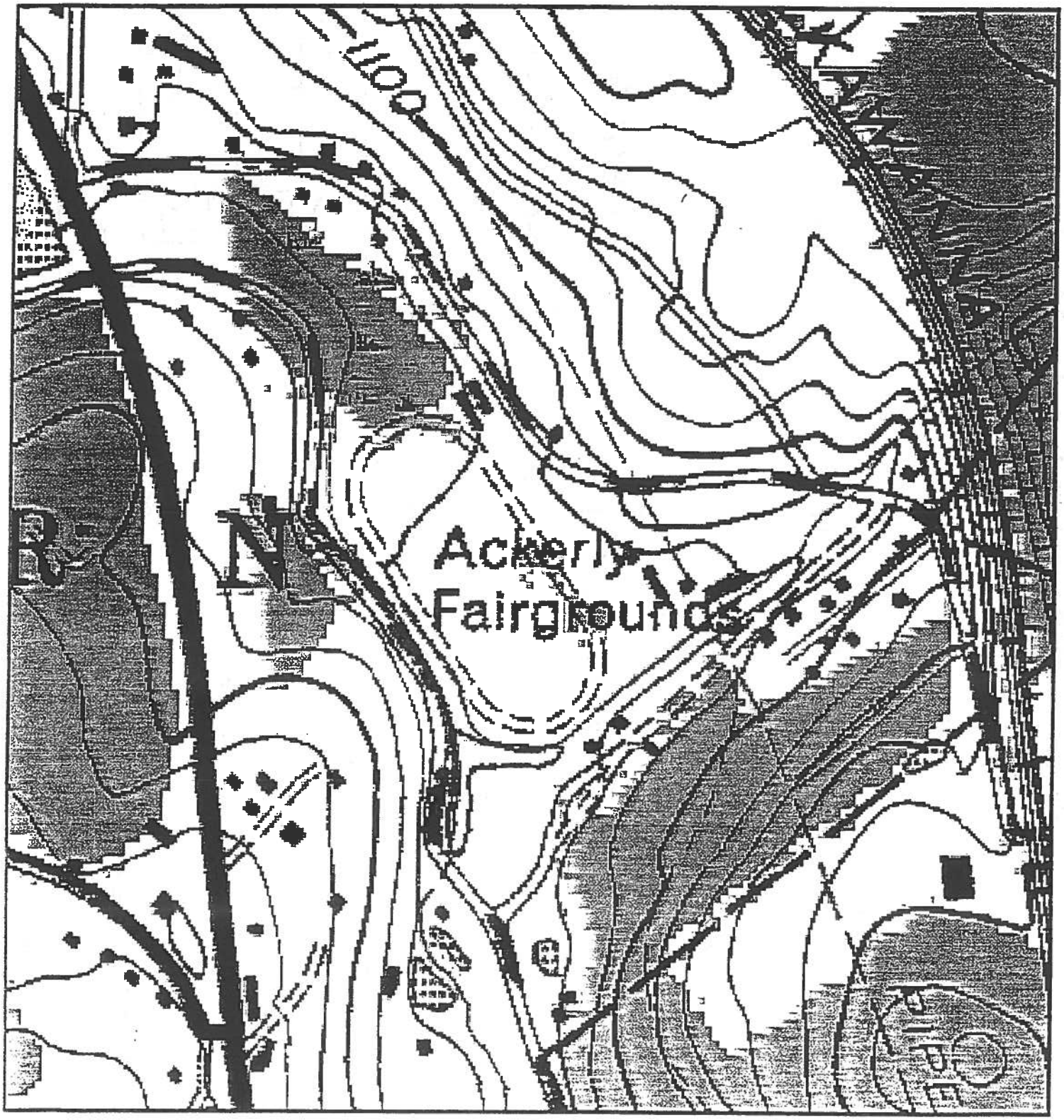

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Figure 3

Precision National

Proposed Sediment/Soil Sampling Locations